

**ICOM**

**IC-M85E**

VHF MARINE TRANSCEIVER

***Marine and PMR Hybrid  
for Professional Use***



# ***Ultra Compact and Powerful with PMR Features***



[ Actual Size ]



VHF MARINE TRANSCEIVER  
**IC-M85E**



## Compact and Lightweight

The IC-M85E is the most compact (W×H×D: 56 × 92 × 36.2 mm) and lightweight (weight: 281 g (with BP-294, FA-SC58V and MBB-3)) commercial grade marine and land mobile hybrid radio in the world\*.

\* As of December 2021, researched by Icom.



## Covering 136–174 MHz PMR Frequency

In addition to VHF marine channels, the IC-M85E covers 136–174 MHz PMR channels. Up to 100 programmable channels are available for PMR use. Each channel is programmable with CTCSS and DTCS tone.



## 700 mW Powerful Audio

Despite its compact body, the IC-M85E delivers 700 mW of loud audio. Clear communications is vital in noisy environments.



## Private Conversation

The radio has a built-in Voice Scrambler and provides private communication between stations (32-code, compatible with UT-112 voice scrambler unit).

### Supplied accessories:



BP-294 battery pack   BC-227 rapid charger   BC-123S\* AC adapter   FA-SC58V antenna

\* SE for Europe plug. SUK for UK plug. SV for Australia plug.



**OPTIONS**

BATTERY PACK AND CASE	
	
<b>BP-294</b> Li-ion battery with intelligent reporting. 3050 mAh (min.) 3150 mAh (typ.). IP67 Waterproof	<b>BP-291</b> Battery case LR6 (AA) x 5. Water resistance

MULTI-CHARGER	
	
<b>BC-214N</b>	<b>AD-132N</b>
<b>BC-157S</b>	
Charges up to six BP-294 batteries in 5.3 hours (approx.). AD-132N is supplied with BC-214N, depending on version.	

CONNECTABLE TYPE CHARGER	
	
<b>BC-226</b>	<b>BC-228</b>
Charges the BP-294 in 4.9 hours. (approx.)	Connects up to six BC-226 units.

INTELLIGENT CHARGER	DESKTOP CHARGERS
	
<b>BC-225</b>	<b>BC-123S*</b>
Shows the charging information with LED lighting. Charges the BP-294 in 4 hours. (approx.)	Charges the BP-294 in 4.9 hours. (approx.)
	
<b>BC-123S*</b>	<b>BC-219N</b>
Shows the charging information with LED lighting. Charges the BP-294 in 4 hours. (approx.)	Charges the BP-294 in 4.7 hours. (approx.)

BELT CLIPS	BELT HANGERS	ACC ADAPTOR
		
<b>MBB-3</b> Alligator type.	<b>MB-136</b> Swivel type.	<b>AD-118</b> 14-pin multi-connector to 6-pin Hirose connector

CARRYING CASES	CIGARETTE LIGHTER CABLE & POWER SUPPLY CABLES	ANTENNA
		
<b>LC-187</b> Hard type. Charging is possible while the case is attached.	<b>LC-188</b> Hard type.	<b>OPC-515L</b> For use with the BC-219N or BC-227.
	<b>OPC-656</b> For use with the BC-219N, BC-225 or BC-227.	<b>OPC-656</b> For use with the BC-214/N.

**SOFTWARE**

- RS-BC225 : Intelligent charger software for Windows® PC. For use with BC-225.

**SPECIFICATIONS**

IC-M85E			
GENERAL	Marine channels	PMR channels	
Frequency coverage	EUR, UK FRG, HOL AUS	Tx:156.000–161.450 MHz Rx:156.000–163.425 MHz Tx:156.025–157.425 MHz Rx:156.300–162.025 MHz	Tx/Rx:136.000–174.000 MHz Tx/Rx:136.000–174.000 MHz
Usable channel groups, Number of channels	INT, USA* channels (* Varies according to version)	100 PMR channels	
Type of emissions	EUR, UK, AUS FRG, HOL	16K0G3E 14K0F3E/8K50F3E	
Channel spacing		25 kHz 25/12.5 kHz 20/12.5 kHz	
Power supply requirement		7.2 V DC nominal	
Current drain (approximate)		Tx:1.5 A (at 5 W)/Rx:0.45 A (Max.audio)	
Antenna impedance		50 Ω	
Operating temperature range	EUR, UK FRG, HOL AUS	-15 °C to +55 °C -10 °C to +55 °C	-25 °C to +55 °C -10 °C to +50 °C
Dimensions (W×H×D)		56 × 92 × 36.2 mm (With BP-294) (Projections not included)	
Weight (approximate)		281 g (with BP-294, FA-SC58V and MBB-3)	
TRANSMITTER			
Output power (at 7.2 V DC)		5/3/1 W	
Max. frequency deviation	EUR, UK, AUS FRG, HOL	±5.0 kHz ±5.0 kHz (Wide), ±2.5 kHz (Narrow). ±4.0 kHz (Wide), ±2.5 kHz (Narrow)	
Frequency stability	EUR, UK FRG, HOL AUS	±1.5 kHz ±1.5 kHz	
Spurious emissions	EUR, UK FRG, HOL AUS	0.25 μW (≤2 GHz), 1.0 μW (>2 GHz) -70 dBc typ.	
Residual modulation		40 dB (40 dB (Wide), 34 dB (Narrow))	
Audio harmonic distortion		10% (at 60% deviation)	
Modulation limiting		60–100% of maximum deviation	
RECEIVER			
Sensitivity (at 20 dB SINAD)		-4 dBμ emf typical -4 dBμ emf typ. (Wide) -2 dBμ emf typ. (Narrow)	
Adjacent channel selectivity		70 dB 70 dB (Wide) 60 dB (Narrow)	
Spurious response		70 dB	
Intermodulation		68 dB 65 dB	
Hum and noise		40 dB 40 dB (Wide), 34 dB (Narrow)	
Audio output	Internal SP External SP	700 mW typical (at 10% distortion with 12 Ω load at 1 kHz) 700 mW typical (at 10% distortion with 8 Ω load at 1 kHz)	

Measurements made in accordance with EN 301-178 or EN 300 086.

All stated specifications are subject to change without notice or obligation.

**Applicable U.S. Military Specifications & IP Rating**

Standard	MIL 810 G	
	Method	Procedure
Low Pressure	500.5	I, II
High Temperature	501.5	I, II
Low Temperature	502.5	I, II
Temperature Shock	503.5	I-C
Solar Radiation	505.5	I
Rain Blowing/Drip	506.5	I, III
Humidity	507.5	II
Salt Fog	509.5	—
Dust Blowing	510.5	I
Immersion	512.5	I
Vibration	514.6	I
Shock	516.6	I, IV

Also meets equivalent MIL-STD-810-C, -D, -E and -F.

**Ingress Protection Standard**

Dust & Water	IP67 (Dust-tight and waterproof protection)
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**Icom Inc.**

1-1-32, Kamiminami, Hirano-Ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013

[www.icomjapan.com](http://www.icomjapan.com)

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**Icom Brazil**  
E-mail: [sales@icombrazil.com](mailto:sales@icombrazil.com)

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